UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10
1200 Sixth Avenue, Suite 900
Seattle, WA 98101-3140

OFFICE OF
ECOSYSTEMS,
TRIBAL AND PUBLIC
AFFAIRS

November 25, 2014

Candace McKinley
Environmental Program Manager
Bureau of Reclamation
Columbia-Cascades Area Office
1917 Marsh Road
Yakima, Washington 98901-2058

Re: Comments on the Draft EIS for the proposed Cle Elum Pool Raise Project (EPA Project Number: 13-0037-BOR).

Dear Ms. McKinley:

In accordance with our responsibilities under Section 309 of the Clean Air Act, the National Environmental Policy Act (NEPA) and the Council on Environmental Quality regulations for implementing NEPA, the U.S. Environmental Protection Agency (the EPA) has reviewed the Draft Environmental Impact Statement (DEIS) for the proposed **Cle Elum Pool Raise** in Kittitas County, Washington.

The DEIS evaluates potential environmental impacts associated with activities to raise the existing Cle Elum Reservoir level three feet to provide 14,600 acre-feet of additional water storage capacity needed to improve instream flows or to supplement the Total Water Supply Available (TWSA). Project activities would include modifying existing reservoir spillway radial gates to raise the pool elevation by 3 ft.; raising existing earthen saddle dikes and the height of the right abutment of the dam to provide adequate freeboard; and protecting the reservoir shoreline from erosion caused by increased water level and other impacts. In some areas, such shoreline protection would require land acquisition or easements from private landowners and new temporary shoreline access roads. The DEIS tiers to the Yakima River Basin Integrated Water Resource Management Plan/EIS.

Analysis of impacts from the proposed project considered five action alternatives (1-5), including a No Action (Alternative 1). The primary distinguishing features between action alternatives involve intended use of additional stored water; instream flows under alternative 2-3 or TWSA under alternative 4-5 and shoreline protection method; rock (riprap with some plantings) under alternative 2 and 4; or a hybrid (a range of treatments, including rock riprap and various bioengineered techniques) under alternatives 3 and 5 (p. 2-3). The DEIS does not identify a preferred alternative.

The EPA supports Reclamation's efforts to increase the capacity of the reservoir and improve aquatic resources for fish habitat, rearing, and migration in the Cle Elum and upper Yakima Rivers. We also appreciate the fact that the DEIS addresses many of the issues we raised during the project scoping period in November 2013, including analysis of cumulative and climate change effects. Also, we note

that Reclamation engaged other resource management agencies and tribes in this project analysis. The DEIS includes a good description of resources within the project area, analysis of anticipated environmental impacts, measures to offset the impacts, and an adaptive strategy to adjust use of additional stored water with changed conditions and new information, as well as in consultation with the System Operations Advisory Committee (SOAC), established to help protect fishery resources from impacts due to the Yakima Project operations. Of the two shoreline protection approaches proposed, we would support the hybrid strategy because we believe that such an approach would effectively deal with the different shoreline sites and affected resources, as it would tailor treatments to each topographic site as needed.

We do have some concerns about the project's potential impacts to water quality, wetlands, riparian areas, and habitat as discussed in our attached detailed comments. We recommend continued work with Washington State Department of Ecology and affected Tribes to assure wise use and protection of water resources in the analysis area as the project is implemented. To protect fish in the reservoir and other streams in the project area, including species that are listed as endangered and threatened, we recommend continued coordination with the U.S. Fish and Wildlife Service and National Marine Fisheries Service as well as Washington State Department of Fish and Wildlife to define water management practices that would be protective of fisheries within waterbodies in the project area, especially those that are water-quality limited.

Based on our review and concerns about water quality and unclear or missing information, we have assigned a rating of EC-2 (Environmental Concerns – Insufficient Information) to the DEIS. For your reference, a copy of the rating system used in conducting our review is enclosed.

Thank you for the opportunity to review and comment on this DEIS. If you have questions about our comments, please contact me at (206) 553-1601 or by electronic mail at reichgott.christine@epa.gov or contact Theo Mbabaliye of my staff at (206) 553-6322 or by electronic mail at mbabaliye.theogene@epa.gov.

Sincerely,

Christine B. Reichgott, Manager
Environmental Review and Sediment Management Unit

Enclosures:
1. EPA Detailed Comments on the Cle Elum Reservoir Pool Raise Project
2. U.S. EPA Rating System

cc: Washington State Department of Ecology

EPA Detailed Comments on the
Cle Elum Reservoir Pool Raise Project

Surface Water Impacts and Wetlands

The DEIS identifies impaired waters in the project area and provides information about the status of applicable Total Maximum Daily Loads (TMDLs) (p. 3-16). Although the Cle Elum Reservoir is not listed on Washington State's 303(d) list for any water quality impairments and no TMDLs are currently in place for the Cle Elum Reservoir or the Cle Elum River, we note that the Cle Elum River immediately above and downstream of the reservoir and the upper Yakima River are impaired due to exceedances of the state water quality standard for temperature (p. 3-21). Similarly, the reservoir itself experiences summer temperatures that exceed the state standard, with a peak of 20°C (68°F) recorded in August 2012 at a depth of 3 ft. Other limiting water quality parameters for the reservoir include typically high phosphorus from June to September. Also, chlorophyll a concentrations, phytoplankton and zooplankton populations, and total organic carbon concentrations affect anadromous fish production (p. 3-19). Water quality within the reservoir and vicinity could be adversely affected if project construction activities, including blasting, surface grading, excavation, and surface pavement (e.g., at Speelyi Beach) alter the hydrology of springs and surface runoff such that erosion carries sediment to surface waters, and soluble pollutants enter local drainages and the underlying aquifer. In addition, groundwater extraction, land disturbance, material storage, waste disposal, inadvertent chemical or hazardous liquid spills, and compaction produced by vehicular traffic can all affect recharge to the local aquifer and groundwater quality.

We support measures that avoid and reduce impacts to the reservoir shoreline. By raising the reservoir pool 3 feet, there would be inundation of up to 46 acres of shoreline, resulting in loss of vegetation and habitat (up to 41 acres), including wetlands (up to 2 acres) and species intolerant of anaerobic conditions. This inundation alone would also increase current erosion of the reservoir shoreline area by up to 5 acres, resulting in sediment discharge into the reservoir causing increases in turbidity (up to 34,000 CY of material deposited in the reservoir) and nutrients from decaying vegetation. Although not evaluated in the DEIS, we are also concerned about cumulative impacts from erosion occurring in the vicinity of the analysis area, which could exacerbate sediment and nutrient loading in the reservoir, as well as in downstream waterways. For example, the DEIS indicates that much of the land surrounding the reservoir is zoned for commercial forest use, where forestry activities may cause significant erosion.

Given our concerns about potential impacts to water quality, we recommend the final EIS include the following:

- Discussion on cumulative impacts to water quality in the reservoir and downstream waterways from erosion that may occur as a result of land use activities in the vicinity of the project area.
- Updated information on the National Pollutant Discharge Elimination System (NPDES) permit application process and measures to protect water quality. (A permit will be necessary since the proposed project would disturb more than 40 acres.)
- Up-to-date information on the status of Clean Water Act Section 401 and 404 permit application processes and conditions to assure compliance with water quality standards and protection of aquatic resources.

Vegetation and Wildlife Impacts
The DEIS indicates that the proposed project would result in adverse impacts to vegetation due primarily to inundation and related loss of species and habitat. Overall, the project would result in a loss of about 30 acres of coniferous forest, 11 acres of deciduous tree/shrub, and 0.1 acres of herbaceous vegetation. Increased Reservoir pool level would also inundate about 2 acres of wetland and cause shifts in wetland vegetation composition and displacement of some species e.g., ground-nesting bird species, such as Canada goose, ruffed grouse, mallard, and mergansers. Loss of vegetation and wetlands would also affect nearly 46 acres of wildlife habitat, causing some species to relocate due to construction activities and others to lose foraging habitat or nesting sites. Wildlife would also be affected due to increased noise and traffic during construction and maintenance of the Reservoir. While we note that some of the impacts would be temporary and indirect, others would be direct, permanent, cumulative and unavoidable.

Because the project may affect federal and state species of concern in the project area and vicinity (p. 4-66), including threatened and endangered fish, we recommend that the final EIS include the following:

- Outcomes of initiated consultations with the U.S. Fish and Wildlife Service and National Marine Fisheries Service, including recommended measures to reduce risks to species and protect biota and habitat within the analysis area and vicinity. Similarly, a discussion on work with the Washington State Department of Fish and Wildlife will also be important.
- Information about plans for control of aquatic weeds in the reservoir.

Seismic risks
Because the Cle Elum Reservoir site is within the Yakima River Project where the Yakima Fold Belt has experienced tectonic folding and faulting in the past; the potential for landslides and slope movement in the analysis area and vicinity exists. Slopes can be inherently unstable due to weak underlying materials, or due to over-steepening or loading of existing stable slopes.

Seepage from the reservoir may also infiltrate both stable and unstable areas, resulting in increased pore pressures that could reactivate landslides or initiate new ones along Reservoir rims and abutments. A full Cle Elum Reservoir, for example, could result in groundwater seepage involving substantial volumes and high hydraulic conductivity, all of which could cause a rise of pore pressures and instability of low strength materials in the reservoir basin. Such seepage from the reservoir has the potential to infiltrate currently stable areas and may increase pore pressures such that slopes could become unstable and slide, particularly during earthquakes. Although there have been no recent landslides in the analysis area, we note that there are two mapped areas, one along the southwest shoreline and the other on the east shoreline near Wish Poosh Campground, that could experience mass wasting (p. 3-14). Because of that, we recommend that the final EIS include the following:

- Results of a seismic analysis or monitoring for the reservoir, including information on how seismicity was evaluated, and how it will be monitored and managed to reduce seismic impacts. A seismic map should either be referenced or included in the final EIS, along with information about appropriate seismic design and construction standards and practices that the project would use to reduce seismic risks.

- Map of areas that are susceptible to landslides and slope movement in the analysis area and vicinity including where construction activities would be located, along with assessment of slope stability, and determination of factors of safety and appropriate mitigation measures.

Monitoring

We recommend that the final EIS describe an environmental inspection and mitigation-monitoring program to ensure compliance with all mitigation measures and assess effectiveness. The final EIS should describe the program and its use as an effective feedback mechanism so that needed adjustments can be made to meet environmental objectives over the reservoir operation and maintenance period.

Because the reservoir has been in operation for over 80 years, the final EIS should also discuss results of monitoring programs that tracked previous management of the reservoir and document adaptive changes made and currently proposed. Lessons learned from past practices and adaptive management efforts, combined with the need to account for new challenges such as climate change, could influence the monitoring and adaptive management strategy for the proposed project.

U.S. Environmental Protection Agency Rating System for
Draft Environmental Impact Statements
Definitions and Follow-Up Action*

Environmental Impact of the Action

LO – Lack of Objections
The U.S. Environmental Protection Agency (EPA) review has not identified any potential environmental impacts requiring substantive changes to the proposal. The review may have disclosed opportunities for application of mitigation measures that could be accomplished with no more than minor changes to the proposal.

EC – Environmental Concerns
EPA review has identified environmental impacts that should be avoided in order to fully protect the environment. Corrective measures may require changes to the preferred alternative or application of mitigation measures that can reduce these impacts.

EO – Environmental Objections
EPA review has identified significant environmental impacts that should be avoided in order to provide adequate protection for the environment. Corrective measures may require substantial changes to the preferred alternative or consideration of some other project alternative (including the no-action alternative or a new alternative). EPA intends to work with the lead agency to reduce these impacts.

EU – Environmentally Unsatisfactory
EPA review has identified adverse environmental impacts that are of sufficient magnitude that they are unsatisfactory from the standpoint of public health or welfare or environmental quality. EPA intends to work with the lead agency to reduce these impacts. If the potential unsatisfactory impacts are not corrected at the final EIS stage, this proposal will be recommended for referral to the Council on Environmental Quality (CEQ).

Adequacy of the Impact Statement

Category 1 – Adequate
EPA believes the draft EIS adequately sets forth the environmental impact(s) of the preferred alternative and those of the alternatives reasonably available to the project or action. No further analysis of data collection is necessary, but the reviewer may suggest the addition of clarifying language or information.

Category 2 – Insufficient Information
The draft EIS does not contain sufficient information for EPA to fully assess environmental impacts that should be avoided in order to fully protect the environment, or the EPA reviewer has identified new reasonably available alternatives that are within the spectrum of alternatives analyzed in the draft EIS, which could reduce the environmental impacts of the action. The identified additional information, data, analyses or discussion should be included in the final EIS.

Category 3 – Inadequate
EPA does not believe that the draft EIS adequately assesses potentially significant environmental impacts of the action, or the EPA reviewer has identified new, reasonably available alternatives that are outside of the spectrum of alternatives analyzed in the draft EIS, which should be analyzed in order to reduce the potentially significant environmental impacts. EPA believes that the identified additional information, data, analyses, or discussions are of such a magnitude that they should have full public review at a draft stage. EPA does not believe that the draft EIS is adequate for the purposes of the National Environmental Policy Act and or Section 309 review, and thus should be formally revised and made available for public comment in a supplemental or revised draft EIS. On the basis of the potential significant impacts involved, this proposal could be a candidate for referral to the CEQ.

* From EPA Manual 1640 Policy and Procedures for the Review of Federal Actions Impacting the Environment. February, 1987.

Recommendation: We recommend the Forest Service clarify the extent to which Plan Objectives in Tables A-48 through A-50 overlap or are independent of one another. We further recommend the FEIS clarify which objectives relate to active versus passive management.